

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a Minor, Industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards (WQS) of 9 VAC 25-260. The proposed discharge will result from the operation of a concentrated, aquatic animal (trout) production facility (SIC Code: 0273 – Animal Aquaculture, 0921 – Fish Hatcheries). This permit action consists of reissuing the permit with revisions to the permit, as needed, due to changes in applicable laws, guidance, and available technical information.

1. Facility Name and Address:
Virginia Trout - Monterey
5480 Potomac River Road
Monterey, VA 24465
Location: 5480 Potomac River Road, Monterey
2. Permit No. VA0091260; Expiration Date: December 31, 2012
3. Owner: Virginia Trout Company, Inc.
Contact Name: Mr. Bryan P. Plemmons
Title: Owner
Telephone No: 540.997.5461
4. Description of Treatment Works: Appendix A
Total Number of Outfalls – 1
5. Application Complete Date: June 19, 2012

Permit Writer: Eric Millard Date: October 19, 2012
Reviewed By: Dawn Jeffries Date: October 22, 2012

Public Comment Period: November 22, 2012 to December 22, 2012
6. Receiving Stream Name: Strait Creek
River Mile: 1.00
Use Impairment: Yes
Special Standards: pH
Tidal Waters: No
Watershed Name: VAV-B02R Upper South Branch Potomac River
Basin: Potomac; Subbasin: Potomac
Section: 12; Class: IV
7. Operator License Requirements per 9 VAC 25-31-200.C: None
8. Reliability Class per 9 VAC 25-790: N/A
9. Permit Characterization:
☒ Private ☐ Federal ☐ State ☐ POTW ☐ PVOTW
☐ Possible Interstate Effect ☐ Interim Limits in Other Document (attach copy of CSO)
10. Discharge Location Description and Receiving Waters Information: Appendix B

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11. Antidegradation (AD) Review & Comments per 9 VAC 25-260-30:
Tier Designation: Tier 1

The State Water Control Board's WQS include an AD policy. All state surface waters are provided one of three levels of AD protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 waters have water quality that is better than the WQS. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 waters are exceptional waters and are so designated by regulatory amendment. The AD policy prohibits new or expanded discharges into exceptional waters.

The AD review begins with a Tier determination. Strait Creek in the immediate vicinity of the discharge is listed as impaired for the General Standard (benthics). A TMDL has been developed for the impairment and identified CBOD₅, TSS, and Ammonia as the cause of the impairment. Benthic impairment is a basis for classifying a receiving stream as Tier 1; therefore, Strait Creek in the immediate vicinity of Outfall 001 is determined to be a Tier 1 water. Antidegradation baselines are not calculated for Tier 1 waters.

12. Site Inspection: Performed by Lisa Kelly on June 25, 2010.
13. Effluent Screening and Effluent Limitations: Appendix C
14. Whole Effluent Toxicity (WET) Program Requirements per 9 VAC 25-31-220.D: N/A
15. Solids generated by fish production are managed in accordance with the Solids Management Plan (SMP) approved September 18, 2008.
16. Bases for Special Conditions: Appendix D
17. Material Storage per 9 VAC 25-31-280.B.2: This permit requires that the facility's O&M Manual include information to address the management of wastes, fluids, and pollutants which may be present at the facility, to avoid unauthorized discharge of such materials.
18. Antibacksliding Review per 9 VAC 25-31-220.L: This permit complies with the antibacksliding provisions of the VPDES Permit Regulation.
19. Impaired Use Status Evaluation per 9 VAC 25-31-220.D: Strait Creek in the vicinity of the discharge is listed in the current 303(d) list of impaired waters for the General Standard (benthics). A TMDL has been established for this impairment, and identifies CBOD₅, TSS, and Ammonia as the cause for the impairment. The facility discharges a parameter of concern (TSS), and the TMDL established a WLA of 30.12 metric tons/year (based on a design flow of 2.18 MGD and a TSS concentration of 10 mg/L).
20. Regulation of Users per 9 VAC 25-31-280.B.9: N/A
21. Storm Water Management per 9 VAC 25-31-120: Application Required? ☐Yes ☒No
The SIC Code for this facility does not fall within the categories requiring storm water special conditions.
22. Compliance Schedule per 9 VAC 25-31-250: There are no compliance schedules included in the reissued permit.
23. Variances/Alternative Limits or Conditions per 9 VAC 25-31-280.B, 100.J, 100.P, and 100.M: None
24. Financial Assurance Applicability per 9 VAC 25: N/A – This facility does not serve private residences.

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25. Virginia Environmental Excellence Program (VEEP) Evaluation per § 10.1-1187.1-7: At the time of this reissuance, is this facility considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level? ☐ Yes ☒ No
26. Nutrient Trading Regulation per 9 VAC 25-820: See Appendix C
General Permit Required: ☐ Yes ☒ No
27. Threatened and Endangered (T&E) Species Screening per 9 VAC 25-260-20 B.8: Because this is not a permit issuance or a reissuance that allows for increased discharge flows, and DCR and DGIF have not requested an opportunity to review the application, T&E screening is not required.
28. Public Notice Information per 9 VAC 25-31-280.B: All pertinent information is on file, and may be inspected and copied by contacting Eric Millard at: DEQ-Valley Regional Office, P.O. Box 3000, Harrisonburg, Virginia 22801, Telephone No. (540) 574-7813, eric.millard@deq.virginia.gov.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

29. Historical Record:

VPDES Permit No. VA0071714 was issued with an effective date of 08/06/96 and expiration date of 08/06/01.

12/27/00 – The applicant submitted a Registration Statement for coverage of the facility under the General VPDES Permit for Concentrated Aquatic Animal Production Facilities.

01/09/01 – DEQ notified the applicant that they had coverage for the facility under the General Permit (VAG131006) described above effective on the expiration date of their current individual permit (08/06/01). The General Permit expired March 5, 2003.

02/06/03 – VPDES Permit No. VA0091260 was signed this date, effective date is 03/06/03 and the expiration date is 03/05/08.

09/27/04 – VPDES Permit No. VA0091260 was modified this date to reflect the change ownership of the permit from Virginia Trout Company to Virginia Trout Co., Inc. that occurred on 09/08/04.

APPENDIX A

FACILITY AND TREATMENT WORKS DESCRIPTIONS

Existing Facility and Treatment Works

Wastewater is produced by the production of rainbow trout grown in raceways and operation of a hatchery using flowing spring water. The discharge is continuous and the quantity varies with the volume of water generated by the spring. The quality of the discharge varies depending on number and size of fish in production, amount and quality of feed provided to the fish, activities performed within the raceways (e.g., feeding, maintenance, harvesting), and ambient temperature.

Fish harvested at this location are cleaned and packaged at this facility. Offal from this operation is hauled to Valley Proteins in Linville, VA (VPA Permit No. VPA01548) where the waste is further processed to create animal feed products. Process wastewater is disposed in an onsite treatment works (septic tank and drain field). The permit does not authorize the discharge of treated or untreated process wastewater to surface waters from any fish processing operation including wastewater resulting from butchering or cleaning, washing, packing and processing-related cleaning of facilities or equipment.

There are no chemicals identified in the O&M Manual that have been reviewed and approved by DEQ for addition to the water or wastewater. The permittee states in the application that there are no chemicals added to the water at this facility that could be present in the discharge. The permit does not authorize the use of any chemicals that might be discharged to surface waters by this facility, unless reviewed and approved by DEQ.

Domestic sewage generated at this location is treated onsite. The permit does not authorize the discharge of treated or untreated sewage to surface waters.

The trout farm typically produces the following types, numbers, and pounds of fish annually :

Species of Fish	Pounds of Fish	
	Total Yearly	Maximum Present
Rainbow Trout	16,000 lbs.	16,000 lbs.

Treatment Works Description and Schematic

The wastewater is discharged to surface waters after passing through two settling ponds with a combined surface area of approximately 1.25 acres.

Disposal of Solids

The applicant believes that solids generated by fish production do not accumulate in quantities that would require disposal because of "...the nature of salmonid waste and the facilities large storage capacity...". The permit does not authorize the discharge of organic solids to the Strait Creek in amounts which cause stream bed accumulations or degradation of State waters as determined in accordance with standard procedures.

Flow:

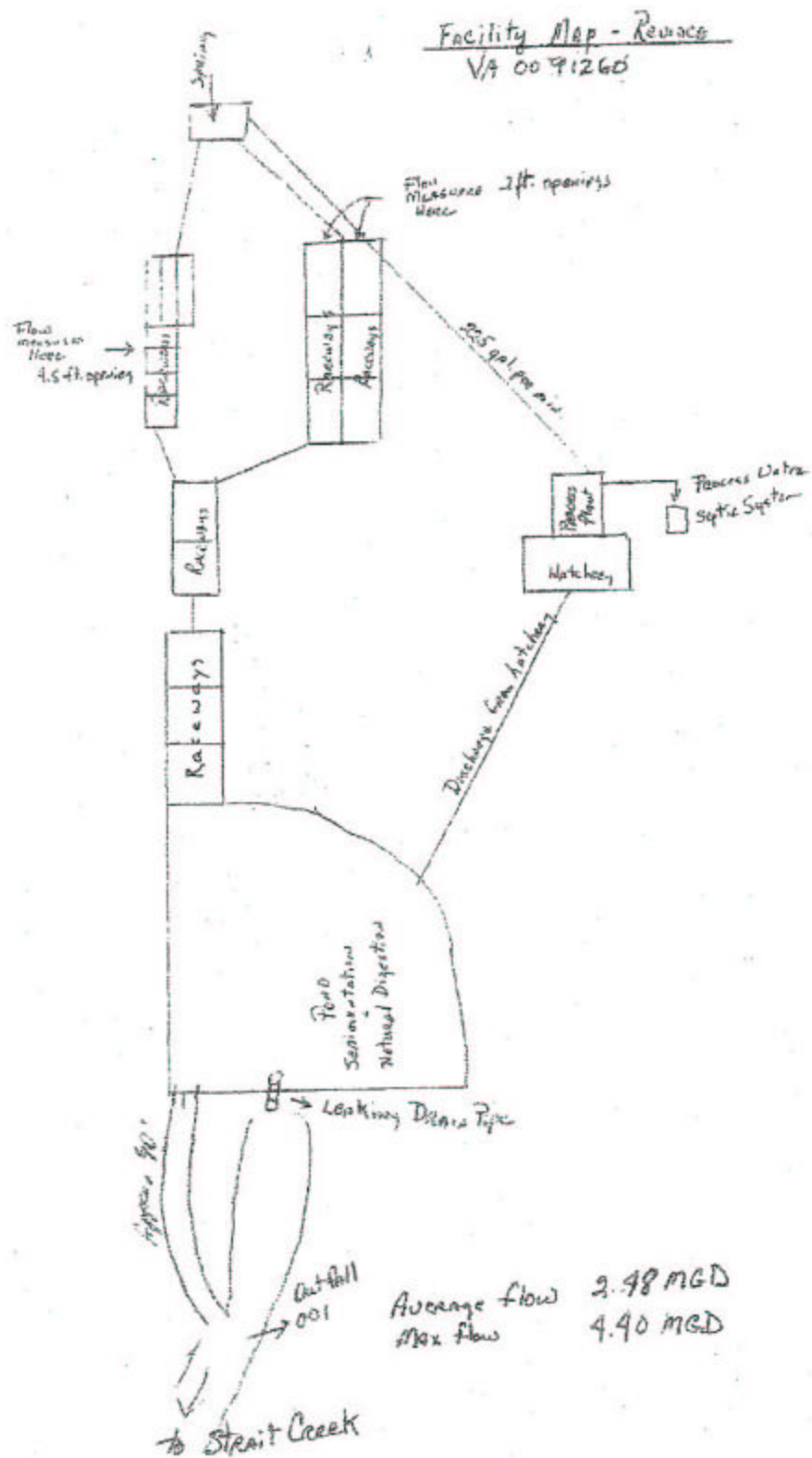
All flow from Vanderveer Spring is used by either the raceways or the hatchery. Spring and discharge flows described in the previous documents and the current application are:

Application Submitted	Maximum Daily Flow	Average Monthly Flow	Units
2002	1.97	---	MGD
2004	3.4	---	MGD
2007	2.8	2.18	MGD
2012	4.44	2.48	MGD

Other Discharges from this Site:

There are no discrete storm water conveyances. Storm water from this site is discharged as sheet flow across grassy areas.

Facility Diagram:

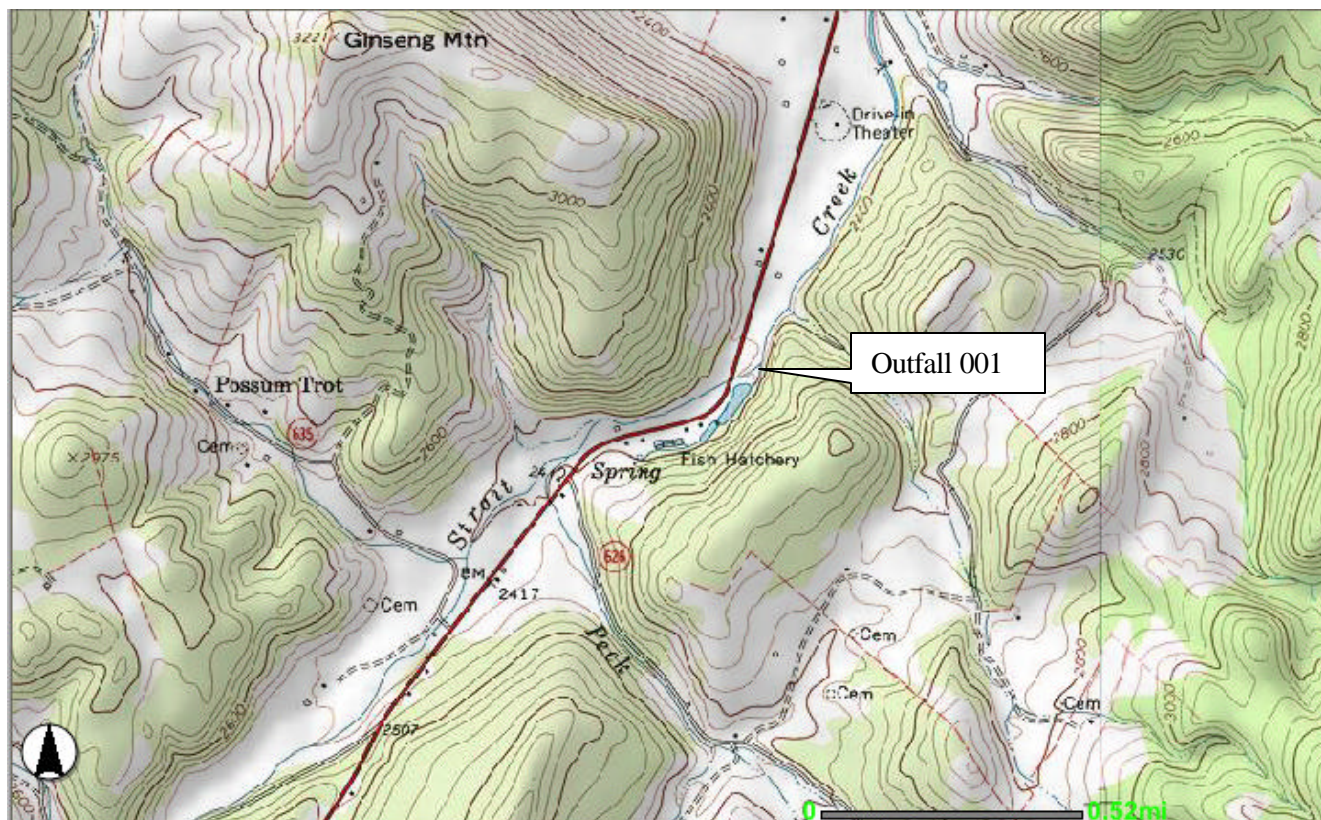


APPENDIX B

DISCHARGE LOCATION AND RECEIVING WATERS INFORMATION

This facility discharges to Strait Creek at the confluence with the channel originating at the discharge weir for the second pond and wholly within the property boundary for this facility. The location of the outfall is shown on the topographic map below.

A stream flow frequency determination and mixing zone analysis are deemed unnecessary because there are no testing results for parameters for which the Board has adopted Water Quality Criteria.



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PLANNING INFORMATION

Relevant points of interest within the watershed and in the vicinity of the discharge are shown on the Water Quality Assessments Review table and corresponding map below.

WATER QUALITY ASSESSMENTS REVIEW						
POTOMAC-SHENANDOAH RIVER BASIN						
10/9/2012						
IMPAIRED SEGMENTS						
SEGMENT ID	STREAM	SEGMENT START	SEGMENT END	SEGMENT LENGTH	PARAMETER	
B02R-01-BAC	West Strait Creek	4.59	3.74	0.85	E-coli	
B02R-01-BEN	West Strait Creek	4.62	3.42	1.2	Benthic	
B02R-01-DO	West Strait Creek	3.74	3.42	0.32	Dissolved Oxygen	
B02R-02-BEN	Strait Creek	3.24	0.00	3.24	Benthic	
B02R-05-BAC	South Branch Potomac River	10.16	0.00	10.16	E-coli	
B02R-06-BAC	Strait Creek	6.01	0.00	6.01	E-coli	
PERMITS						
PERMIT	FACILITY	STREAM	RIVER MILE	LAT	LONG	WBID
VA0091260	Virginia Trout-Monterey	Strait Creek	1	382815	0793050	VAV-B02R
VA0023281	Monterey STP	West Strait Creek	3.85	382454	0793424	VAV-B02R
MONITORING STATIONS						
STREAM	NAME	RIVER MILE	RECORD	LAT	LONG	
S. Branch Potomac River	1ASOA003.77	3.77	37803.00	382951	793256	
S. Branch Potomac River	1ASOA005.66	5.66				
Strait Creek	1ASTC000.02	0.02	33420.00	382854	793032	
Strait Creek	1ASTC001.54	1.54	39064.00	382709	793222	
S. Branch Potomac River	1ASOA001.00	1	07/01/91	382856	0793034	
Strait Creek	1ASTC004.27	4.27	7/1/97	382609	0793155	
Strait Creek	1ASTC000.62	0.62		382817	0793045	
Strait Creek	1ASTC000.72	0.72	5/1/96	382813	0793052	
Strait Creek	1ASTC000.92	0.09				
West Strait Creek	1AWSC003.46	3.46				
West Strait Creek	1AWSC003.54	3.54	10/28/98	382501	0793221	
West Strait Creek	1AWSC003.79	3.79	05/11/95	382449	0793427	
PUBLIC WATER SUPPLY INTAKES						
OWNER	STREAM	RIVER MILE				
None						
WATER QUALITY MANAGEMENT PLANNING REGULATION						
Is this discharge addressed in the WQMP regulation? No						
If Yes, what effluent limitations or restrictions does the WQMP regulation impose on this discharge?						
PARAMETER	ALLOCATION					
WATERSHED NAME						
VAV-B02R Upper South Branch Potomac River						

Virginia Trout-Monterey- Water Quality Assessments Review
October 9, 2012



NPDES PERMIT RATING WORKSHEET

Facilities identified under SIC 0273 – Animal Aquaculture and SIC 0921 – Fish Hatcheries, have the following characteristics as defined in Appendix A to the NPDES Permit Rating Work Sheet found in the VPDES Permit Manual.

1987 SIC Code Title	ELG Subcategory	ELG Subcategory Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-Category Number
0273 – Animal Aquaculture	NR	NR	1	1	99
0921 – Fish Hatcheries	NR	NR	1	1	99

A new Worksheet was prepared at this reissuance. The results of the review are detailed below. This Worksheet indicates a Score of **40** points.

Factor 1 – Toxic Pollutant Potential: 5 Points

The facility has one process waste stream; the discharge of water from the raceways. Toxicity Group number 1 corresponds to code 1, resulting in 5 points for this factor.

Factor 2 – Flow/Stream Flow Volume : 30 Points

The instream waste concentration (IWC) was previously determined in 2002 to be >50%. For Type II wastewaters, when the IWC is >50%, the resulting score for this factor is 30 points. The maximum 30 day average effluent flow is estimated to be 4.44 MGD, and the most recent estimate of the 7Q10 is 1.5 MGD (Flow Frequency Determination dated October 11, 2002). The Instream Waste Concentration (IWC) is approximately 75%. For Type II wastewaters, when the IWC > 50%, the resulting score for this factor is 30 points.

Factor 3 – Conventional Pollutants: 5 Points

The permit does not contain limits for: A. Oxygen Demanding Pollutants or C. Nitrogen Pollutants. The permit does contain limits for B. Total Suspended Solids. Conventional pollutant loads are computed only when they are limited by the permit. At a TSS limit of 10 mg/L and max 30 day flow of 4.44 MGD, the facility has the potential to discharge approximately 333 pounds per day of TSS. TSS Item 3.B. at 100 to 1000 lbs/day corresponds to code 2, resulting in 5 points for this factor.

Factor 4 – Public Health Impact: 0 Points

Using a worst case evaluation, it is assumed that there is a public drinking water supply within 50 miles downstream of the facility. A human health toxicity number of 1 corresponds to code 1, resulting in 0 points for this factor.

Factor 5 – Water Quality Factors : 0 Points

There are no limitations based on water quality factors, and the receiving stream is not designated as impaired. The effluent does not exhibit a reasonable potential to violate surface water quality standards for whole effluent toxicity. 0 points are scored for this factor.

Factor 6 – Proximity to Near Coastal Waters: 0 Points

This facility was determined to have a Headquarters Priority Permit Indicator (HPRI) # of 4 because this facility is a discharger in a non-coastal county, some part of which is in an estuary drainage area, discharging into fresh non-tidal waters. A HPRI # of 4 corresponds to code 4 and a HPRI Score of 0. The Flow Code of 53 was taken from Factor 2 and corresponds to a Multiplication Factor of 0.60. The HPRI Score was multiplied by the Multiplication Factor resulting in 0 points for Section A of this factor. Because this facility does not discharge to an estuary that is listed in the National Estuary Protection (NEP) program or the Chesapeake Bay (HPRI Code 3), Section B is not applicable. Because this facility does not discharge to one of the Great Lakes Areas of Concern, Section C is not applicable. No points are scored for this factor.

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NPDES PERMIT RATING WORK SHEET

NPDES NO. **VA0091260**

Facility Name: **Virginia Trout-Monterey**

City: **N/A**

Receiving Water: **Strait Creek**

Reach Number:

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
 2. A nuclear power plant
 3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate
- ☐ YES; score is 600 (stop here) ☒ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

- ☐ YES; score is 700 (stop here)
☒ NO (continue)

- ☐ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status change
☐ Deletion

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary SIC Code: **0273** Other SIC Codes: _____
 Industrial Subcategory Code: **99** (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams			<input type="checkbox"/> 3.			<input type="checkbox"/> 7.	7	35
<input checked="" type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 1

Total Points Factor 1: 5

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A ☐ Wastewater Flow Only Considered

Wastewater Type (See Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	3

Section B ☒ Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50 %	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input checked="" type="checkbox"/> 53	30

Code Checked from Section A or B: 53

Total Points Factor 2: 30

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FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ☐ BOD ☐ COD ☐ Other: N/A

Permit Limits: (check one)			Code	Points
<input type="checkbox"/>	< 100 lbs/day		1	0
<input type="checkbox"/>	100 to 1000 lbs/day		2	5
<input type="checkbox"/>	> 1000 to 3000 lbs/day		3	15
<input type="checkbox"/>	> 3000 lbs/day		4	20

Code Checked : N/A

Points Scored: N/A

B. Total Suspended Solids (TSS)

Permit Limits: (check one)			Code	Points
<input type="checkbox"/>	< 100 lbs/day		1	0
<input checked="" type="checkbox"/>	100 to 1000 lbs/day		2	5
<input type="checkbox"/>	> 1000 to 5000 lbs/day		3	15
<input type="checkbox"/>	> 5000 lbs/day		4	20

Code Checked : 2

Points Scored: 5

C. Nitrogen Pollutant: (check one) ☐ Ammonia ☐ Other: N/A

Permit Limits: (check one)		Nitrogen Equivalent	Code	Points
<input type="checkbox"/>	< 300 lbs/day		1	0
<input type="checkbox"/>	300 to 1000 lbs/day		2	5
<input type="checkbox"/>	> 1000 to 3000 lbs/day		3	15
<input type="checkbox"/>	> 3000 lbs/day		4	20

Code Checked : N/A

Points Scored: N/A

Total Points Factor 3: 5

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

☒ YES (If yes, check toxicity potential number below)

☐ NO (If no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column ☐ check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input checked="" type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked : 1

Total Points Factor 4: 0

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FACTOR 5: Water Quality Factors

- A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge:

<input type="checkbox"/>	Yes	Code 1	Points 10
<input checked="" type="checkbox"/>	No	2	0

- B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

<input checked="" type="checkbox"/>	Yes	Code 1	Points 0
<input type="checkbox"/>	No	2	5

- C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

<input type="checkbox"/>	Yes	Code 1	Points 10
<input checked="" type="checkbox"/>	No	2	0

Code Number Checked : A 2 B 1 C 2

Total Points Factor 5: A 0 + B 0 + C 0 = 0 TOTAL

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from Factor 2): 53

Enter the multiplication factor that corresponds to the flow code: 0.60

Check appropriate facility HPRI Code (from PCS):

	HPRI#	Code	HPRI Score	Flow Code	Multiplication Factor
<input type="checkbox"/>	1	1	20	11, 31, or 41	0.00
<input type="checkbox"/>	2	2	0	12, 32, or 42	0.05
<input type="checkbox"/>	3	3	30	13, 33, or 43	0.10
<input checked="" type="checkbox"/>	4	4	0	14 or 34	0.15
<input type="checkbox"/>	5	5	20	21 or 51	0.10
				22 or 52	0.30
				23 or 53	0.60
				24	1.00

HPRI code checked: 4

Base Score: (HPRI Score) 0 x (Multiplication Factor) 0.60 = 0 (TOTAL POINTS)

- B. Additional Points --- NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay? **N/A**

	Code	Points
<input type="checkbox"/> Yes	1	10
<input type="checkbox"/> No	2	0

- C. Additional Points --- Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see Instructions)? **N/A**

	Code	Points
<input type="checkbox"/> Yes	1	10
<input type="checkbox"/> No	2	0

Code Number Checked : A 0 B N/A C N/A

Points Factor 6: A 0 + B N/A + C N/A = 0 TOTAL

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SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	<u>5</u>
2	Flows/Stream Flow Volume	<u>30</u>
3	Conventional Pollutants	<u>5</u>
4	Public Health Impacts	<u>0</u>
5	Water Quality Factors	<u>0</u>
6	Proximity to Near Coastal Waters	<u>0</u>
TOTAL (Factors 1-6)		<u>40</u>

S1. Is the total score equal to or greater than 80? [] Yes (Facility is a major) [X] No

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

[X] No

[] Yes (Add 500 points to the above score and provide reason below:

Reason:

New Score: 40

Old Score: 40

Eric Millard

Permit Reviewer's Name

540-574-7813

Phone Number

October 19, 2012

Date

APPENDIX C

EFFLUENT SCREENING AND EFFLUENT LIMITATIONS

EFFLUENT LIMITATIONS

A comparison of technology and water quality-based limits was performed and the most stringent limits were selected, as summarized in the table below.

Outfall 001

Final Limits

Design Flow: 2.42 MGD

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		Monthly Average	Maximum	Frequency	Sample Type
Flow (MGD)	1	NL	NL	1/Quarter	Estimate
TSS (mg/L)	2,3	9.0	14	1/Quarter	Composite

NL = No Limitation, monitoring required

Composite = Combination of eight or fewer hourly grab samples, collected over the duration of a normal operating day during periods of representative discharges, including discharges during fish harvesting, unit cleaning, and/or solids removal operations.

BASIS DESCRIPTIONS

1. VPDES Permit Regulation (9 VAC 25-31)
2. Best Professional Judgment (BPJ)
3. West Strait Creek/Strait Creek TMDL approved on September 10, 2009

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LIMITING FACTORS – OVERVIEW:

The following potential limiting factors have been considered in developing this permit and fact sheet:

Water Quality Management Plan Regulation (WQMP) (9 VAC 25-720)	
A. TMDL limits	TSS
B. Non-TMDL WLAs	None
C. CBP (TN & TP) WLAs	None
Federal Effluent Guidelines	None
BPJ/Agency Guidance limits	TSS
Water Quality-based Limits - numeric	None
Water Quality-based Limits - narrative	None
Technology-based Limits (9 VAC 25-40-70)	None
Whole Effluent Toxicity (WET)	Not applicable
Storm Water Limits	Not applicable

EVALUATION OF THE EFFLUENT:

The 1998¹ Fact Sheet (FS) developed for the issuance of the General Permit for Concentrated Aquatic Animal Production Facilities documented the state-wide evaluation of the discharges authorized by individual VPDES Permits for these facilities. The FS documented the review of the available effluent data and determined that: 1) Ammonia-N, Dissolved Oxygen, BOD, Temperature, pH and Nutrients are not significant in the discharges; 2) Ammonia-N, Dissolved Oxygen, BOD, pH and Nutrients are associated with solids (controlled by TSS and SS limitations); 3) there is no evidence for Oxygen depletion due to BOD; 4) Ammonia-N was present in low concentrations and limits were not required when performing a reasonable potential analysis for toxics under worst case conditions; and 5) nutrients were at low levels consistent with the nutrient policy. This new information satisfied the exception to the antibacksliding policy and no limits for these parameters were imposed in the individual permits issued in 2003.

The 1998 FS also documents benthic surveys performed 1995-1996 that indicated impacts to the benthos from solids. Technology-based effluent limits for Total Suspended Solids (TSS) and Settleable Solids (SS), with concurrent flow monitoring, were imposed in the General Permit based on Agency guidance.² A water quality based special condition was also imposed as a performance criterion for organic solids to ensure that the general standard is maintained.

The evaluation of possible stressors performed during the development of a TMDL³ for streams impacted by trout farms considered potential impacts from Ammonia-N (toxic), low DO, temperature, or pH. All instream data for these parameters downstream from these facilities were consistently better than the instream WQS. Nutrients (N and P) were considered probable stressors; however, the TMDL advisory panel of experts concluded that management activities to control solids would also control excess nutrients reaching the impaired streams. Organic solids (OS) were determined to be the critical stressor to the benthic macroinvertebrate community. The TMDL established effluent loads and limitations for TSS that would provide adequate controls for OS. Effluent limitations for SS were not carried forward from the General Permit to this individual permit in 2003 because OS was considered the critical stressor in the discharge. It was documented in the 2002 Fact Sheet⁴ for issuance of this permit that deleting the limits for SS based on new information qualified for the exemption to backsliding provided at 9 VAC 25-31-220.L.2.b.(1).

The West Strait Creek/Strait Creek TMDL, approved on September 10, 2009, established a WLA for this facility of 30.12 metric tons TSS per year. The TSS WLA was established based on the permitted flow at the time of 2.18 MGD and a TSS concentration of 10 mg/L.⁷ The long term average flow at this reissuance was calculated from data provided by the permittee on quarterly DMRs between 2008 and 2012. Using the 2008-2012 data, the long term average flow from the spring has increased, and therefore, the effluent discharge has increased. The monthly average TSS concentration has

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been reduced from 10 mg/L to 9.0 mg/L to comply with the TMDL WLA. No schedule of compliance has been included in the permit based on a review of the quarterly TSS monitoring results submitted with the DMR from 2004 to present. These data show no exceedances of the more stringent limit.

The facility does not meet the definition of “concentrated aquatic animal production facilities” as defined at 40 CFR 122.24⁵ and Appendix C of 40 CFR Part 122⁵. The facility does not have annual production level of 100,000 pounds or more of aquatic animals, and therefore, the discharge is not subject to additional regulations under the Effluent Limitation Guideline at 40 CFR 451.⁶ Regardless, many of the requirements defined at 40 CFR 451.11 for the larger production facilities have been addressed in the currently approved O&M Manual.

The facility average flow was set at 2.42 MGD at this reissuance based on the long term average wastewater flow reported in DMR’s during the previous permit term (2008-2012). Flow to the facility is controlled by the spring output, which is variable based on prevailing climatic conditions and resultant groundwater table elevation.

There are no other data to evaluate.

References:

1. Fact Sheet for Issuance of a General VPDES Permit to Discharge to State Water and State Certification under the State Water Control Law. (Effective Date: March 5, 1998. Expiration Date: March 5, 2003)
2. Guidance Memo No. 98-2004. Implementation Guidance for VPDES General Permit VAG131000, Concentrated Aquatic Animal Production Facilities.
3. Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins. Submitted by Virginia Department of Environmental Quality and Virginia Department of Conservation and Recreation. Prepared by The Virginia Water Resources Research Center, Virginia Tech. April 29, 2002.
4. Fact Sheet for Issuance of VPDES Permit No. VA0091260 drafted by Brandon D. Kiracofe on November 20, 2002.
5. 40 CFR Part 122 - EPA Administered Permit Programs: The National Pollutant Discharge Elimination System, 40 CFR Part 122.24 - Concentrated aquatic animal production facilities (applicable to State NPDES programs, Appendix C to 40 CFR Part 122 - Criteria for Determining a Concentrated Aquatic Animal Production Facility.
6. 40 CFR Part 451 - Concentrated Aquatic Animal Production Point Source Category, Subpart A-Flow-Through and Recirculating Systems Subcategory
7. West Strait Creek/Strait Creek TMDL Report. Prepared by Engineering Concepts, Inc. Approved on September 10, 2009.

APPENDIX D

BASES FOR PERMIT SPECIAL CONDITIONS

Tabulated below are the sections of the permit, with any changes and the reasons for the changes identified. Also provided is the basis for each of the permit special conditions.

Cover Page	<ul style="list-style-type: none">• Content and format as prescribed by the VPDES Permit Manual.
Part I.A.1.	Effluent Limitations and Monitoring Requirements: <i>Updates Part I.A.1. of the previous permit.</i> <ul style="list-style-type: none">• More stringent TSS concentration limits were included.
Part I.B.	Effluent Limitations and Monitoring Requirements – Additional Instructions: <i>Updates Part I.B. of the previous permit.</i> The paragraph regarding significant digits was revised. Authorized by VPDES Permit Regulation, 9 VAC 25-31-190.J.4 and 220.I. This condition is necessary when a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.
Part I.C.1.	Materials Handling/Storage: <i>Identical to Part I.C.1. of the previous permit.</i> 9 VAC 25-31-280.B.2. requires that the types and quantities of “wastes, fluids, or pollutants which are ... treated, stored, etc.” be addressed for all permitted facilities.
Part I.C.2	O&M Manual Requirement: <i>Updates Part I.C.2. of the previous permit.</i> Code of Virginia at 62.1-44.16, VPDES Permit Regulation 9 VAC 25-31-190 E, and 40 CFR 122.41(e) require proper operation and maintenance of the permitted facility.
Part I.C.3.	Reopeners: a. <i>New Requirement:</i> Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act. b. <i>Updates Part I.C.3. of the previous permit:</i> 9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.
Part I.C.4.	Notification Levels: <i>Identical to Part I.C.4. of the previous permit.</i> Required by the VPDES Permit Regulation 9 VAC 25-31-200 A for all manufacturing, commercial, mining, and silvicultural dischargers.
Part I.C.5.	<i>Identical to Part I.C.5. of the previous permit.</i> Prohibits the discharge of sewage and is required since sewage wastewater discharges were not evaluated for limits under this permit.
Part I.C.6.	<i>Identical to Part I.C.6. of the previous permit.</i> Prohibits the discharge of fish processing wastewater and is required since fish processing wastewater discharges were not evaluated for limits under this permit.
Part I.C.7.	<i>Identical to Part I.C.7. of the previous permit.</i> Prohibits discharges containing unapproved chemicals, toxic chemicals, or chlorine and is required since those parameters were not evaluated for limits under this permit. DEQ shall have the opportunity to review and approve the use of all chemicals used in the production operation through the O&M Manual review and approval process.
Part I.C.8.	<i>Identical to Part I.C.8. of the previous permit.</i> The prohibition of the discharge of excess organic solids is based on the narrative section of the WQS regulation.

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Part II

Conditions Applicable to All VPDES Permits: *Identical to Part II of previous permit.* VPDES Permit Regulation 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed. Part II,A.4. language added for Virginia Environmental Laboratory Accreditation Program (VELAP) per 1 VAC 30, Chapter 45: Certification for Noncommercial Environmental Laboratories, and 1 VAC 30, Chapter 46: Accreditation for Commercial Laboratories.

DELETIONS

Tabulated below are the sections of the previous permit that were deleted and the basis for this action.

Part I.C.3.a. Nutrient concentration limits reopener: Removed at the reissuance because this facility is not expected to contribute a significant amount of nutrients to the receiving stream nor install nutrient removal technology.